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Examiner: Matthew J. Sullivan
Group Art Unit: 3677

Amendments to the Drawings

Please replace the drawing sheet containing Figures 1-4 with the replacement sheet filed with this response. As shown in the annotated drawing sheet filed with this response, the drawings illustrated on the replacement sheet are the same as the previous drawings except that the mislabeled part 9 in Fig. 2 has been corrected to read 11a.

Remarks/Arguments

Claims 1-3 and 8-20 are pending in the application. By this amendment, claim 1 has been amended for clarity. Applicants believe the amendments made herein add no new matter. Any amendments to the claims which have been made in this amendment, and which have not been specifically noted to overcome a rejection based on prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to be attached thereto. Reconsideration and reexamination of the application is respectfully requested in view of the amendments and the following remarks.

Interview Summary

The Applicants kindly thank the Examiner for the telephonic interview with the Applicants' representatives on January 16, 2009. During the interview, the Applicants' representatives and the Examiner discussed the rejections of claims 1-3 and 8-20 and the cited prior art. No agreement was reached regarding the allowance of the claims or the proposed amendment to claim 1.

Claim Rejections - 35 U.S.C. §103(a)

Claims 1-3 and 10-12, 15, 16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cobb, U.S. Patent 3,437,346 in view of Svenvig, U.S. Patent 957, 480. The rejection is respectfully traversed.

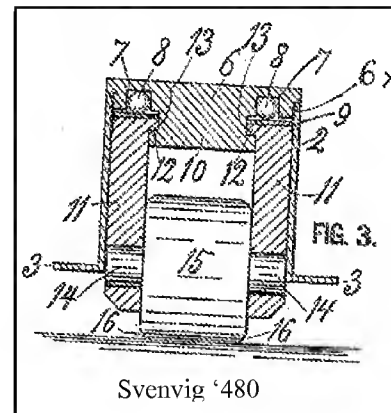
Cobb '346 discloses a vertically adjustable front wheel assembly for supporting a refrigerator cabinet or the like. The assembly comprises a carriage supporting a wheel **46** on a horizontal axle **48** for rotation around a horizontal axis. The carriage is slidably received by a housing that is installed within an opening in the cabinet. The carriage can be adjusted vertically within the housing by means of a bolt **72**. The only rotation disclosed by Cobb '346 is the rotation of the wheel **46** about the horizontal axis. Cobb '346 does not disclose a vertical or swivel axis.

Svenvig '480 discloses a type of caster wheel that can be assembled as a complete article and inserted into a cavity in a piece of furniture or article. The wheel assembly comprises a shell **2** that clasps a plug **6** that closes an upper end of the shell **2**, the shell **2** having a pair of flanges **3**

at a lower end for mounting to the article that is being supported. The plug **6** has an annular groove **7** in which are located balls **8** that are held in place by a washer **9** which surrounds a central boss **10** depending from the plug **6**. The washer **9** is held in touch with the balls **8** by the upper ends of segmental cheek plates **11**. The cheek plates **11** support a trunion **14** at a lower end that supports a roller **15**. The roller **15** rolls upon the floor on a lower side. Svenvig '480 does not have a vertical swivel axis.

The rejection over the combination of Cobb '346 and Svenvig '480 is traversed because the combination fails to meet the *prima facie* requirements as set forth under *Graham v. John Deere*, 383 U.S. 1; 86 S. Ct. 684; 15 L. Ed. 2d 545 (1966). More specifically, the combination is based on a mischaracterization of Svenvig '480, which means the rejection has not met the *Graham* requirement that the prior art be properly construed.

As disclosed in the specification, the pieces of the wheel assembly of Svenvig '480 are held together so tightly as to prohibit the possibility of rotation about a vertical swivel axis. The upper end of the shell **2** is provided with a few side slits **5** to permit the shell **2** to act as a clasp about a reduced portion **6x** of the plug **6**. Page 1, ln. 44-49. Claim 4 further defines the relationship between the shell **2** and the plug **6** as requiring the reduced portion **6x** to be adapted to be forced into the shell **2**. Page 2, ln. 17-20. This tight compression fit described by Svenvig '480 between the shell **2** and the plug **6** prohibits any rotation of either part relative to each other about a vertical swivel axis.



The relationship between the shell **2** and the cheek plates **11** is also defined by Svenvig '480. The shell **2** is described as fitting so snugly over the cheek plates **11** as to hold them firmly against the boss **10** of the plug **6**. The plug **6** is embraced so firmly by the upper end of the shell **2** as to hold the structure together as a complete article, ready to be applied to the piece of furniture. Page 1, ln. 64-70. Because both the plug **6** and the cheek plates **11** are being "firmly" and "tightly" held together by the shell **2**, there is no possible way for either the plug **6** or the

cheek plates **11** to rotate either relative to each other or relative to the shell **2** about a vertical swivel axis.

Ball bearings have many uses in supporting both axial and radial loads. Thrust bearings are typically used to support axial loads with little or no radial load. The use of the balls **8** disclosed by Svenvig '480 must be interpreted in light of the bulk of the specification, which, as discussed above clearly describes a caster assembly incapable of rotation about a vertical swivel axis. Because neither the plug **6**, cheek plates **11** or shell **2** is capable of rotation about a vertical swivel axis when assembled and inserted into a cavity of a piece of furniture or other article, it is most logical to conclude, based on the specification, that the balls **8** are simply thrust bearings, as is known in the art.

When the prior art is properly construed, then the resulting combination does not render the claims obvious as asserted in the Office Action. Because neither Svenvig '480 nor Cobb '346 teaches a vertical swivel axis, the resulting combination will not have a vertical swivel axis. Both claims 1 and 11 expressly call for a swivel axis of rotation. As this express limitation is not found in the combination, claims 1 and 11 are not obvious in view of the combination. Therefore, claims 1 and 11 are patentably distinct from both Cobb '346 and Svenvig '480 either alone or in combination.

Claim 1 further calls for a rotary element having a step defining a first diameter and a stationary element having a step defining a second diameter less than the first diameter wherein the respective steps elastically constrain the elements. An appendix of the rotary element is received within a discontinuous annular groove of the stationary element to center the elements such that they mutually rotate about the swivel axis. The combination of Cobb '346 and Svenvig '480 does not teach such a structure. Svenvig '480 describes the plug **6** and the cheek plates **11** as being held "firmly" or "tightly" together by the shell **2**, therefore the elements of the wheel assembly are compressed together, not elastically constrained, as set forth in claim 1. Further, because neither the plug **6** nor the cheek plates **11** can rotate relative to each other or to the shell **2**, Svenvig '480 does not teach a rotary element received within a stationary element such that they mutually rotate about the swivel axis, as further set forth in claim 1. Cobb '346, which the

Examiner agrees does not teach a vertical swivel axis, also does not teach either of these additional elements of claim 1.

Because neither Cobb '346 nor Svenvig '480, either alone or in combination, teach these additional claim elements, claim 1 is further patentably distinct over Cobb '346 and Svenvig '480 either alone or in combination.

Claim 11 further calls for an elastic snap-fit connection coupling the stationary element to the rotary element such that the swivel axis intersects the horizontal axis and the rotary element is free to rotate relative to the stationary element. As discussed previously with respect to claim 1, Svenvig '480 discloses a compression fit, not a snap-fit connection between elements and does not teach a rotary element that is free to rotate relative to the stationary element such that the swivel axis intersects the horizontal axis, as set forth in claim 11. Cobb '346, which the Examiner agrees does not teach a vertical swivel axis, also does not teach an elastic snap-fit connection.

Because neither Cobb '346 nor Svenvig '480, either alone or in combination, teach these additional claim elements, claim 11 is further patentably distinct over the combination of Cobb '346 and Svenvig '480.

Therefore, claims 1 and 11 are patentable over the combination of Cobb '346 and Svenvig '480. Claims 2-3, 10, 12, 15, 16 and 20, which depend from either claim 1 or claim 11 are patentable over Cobb '346 and Svenvig '480, either alone or in combination, for the same reasons as claims 1 and 11 discussed above.

Claims 8, 9, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cobb, U.S. Patent 3,437,346, and Svenvig, U.S. Patent 957, 480, and further in view of Raffaeli, U.S. Patent 4,554,704. The rejection is respectfully traversed.

Raffaeli '704 discloses a caster wheel assembly wherein the bearings and bearing surface between a swivel plate capable of rotation with respect to a horn portion can be coated with a self-lubricating material, such as a fluorocarbon polymer coating.

Independent claim 1, from which claims 8 and 9 depend, and independent claim 11, from which claims 18 and 19 depend, are patentable over the combination of Cobb '346, Svenvig '480

and Raffaeli '704 for the same reasons claims 1 and 11 are patentable over the underlying combination of Cobb '346 and Svenvig '480 as discussed above. Raffaeli '704 does nothing to overcome the shortcomings of the underlying combination regarding claims 1 and 11. Raffaeli '704 does not teach the elements of a horizontal rotation axis arranged to rotate about a vertical swivel, a rotary element and a stationary element that mutually rotates about the swivel axis or steps that elastically constrain the rotary and stationary elements, as set forth in claim 1. Nor does Raffaeli '704 teach the elements of a rotary element configured to rotate about a swivel axis relative to the stationary element or an elastic snap-fit connection between the rotary and stationary elements, as set forth in claim 11.

Therefore, claims 8, 9, 18 and 19, which depend from claims 1 and 11, are patentable over the combination of Cobb '346, Svenvig '480 and Raffaeli '704 for the same reasons claims 1 and 11 are patentable over Cobb '346 and Svenvig '480 as discussed above.

Claims 13, 14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cobb, U.S. Patent 3,437,346, and Svenvig, U.S. Patent 957, 480, as applied to claims 1-3 and 10-12, 16 and 20 above, and further in view of Steininger, U.S. Patent 4,965,915. The rejection is respectfully traversed.

Steininger '915 discloses a plug for the bearing of an autohoist arm on a motor-vehicle body. Steininger '915 discloses a plug **2** comprising a receiving part **4** and a spacer piece **8**. The spacer piece **8** has four noses **9** that may be elastically snapped into cutouts **10** in the receiving part **4** of the plug **2**. Steininger '915 does not disclose any rotating elements.

The combination of Steininger '915 with Cobb '346 and Svenvig '480 is not proper because Steininger '915 is not analogous art. First, Applicants' field of endeavor is not the same as Steininger's '915 field of endeavor. The Applicants' field of endeavor is caster wheels. Steininger's '915 field of endeavor is bearings for autohoist arms. Steininger's '915 field is not at all concerned with rotation, which is a primary concern in the field of wheels.

The problem being solved by Steininger '915 is different than the problem being solved by the Applicants' invention. Steininger '915 is attempting to provide a plug for an autohoist

bearing that can be easily locked into place and removed. The Applicants' invention addresses assembling stationary and rotary elements of a wheel assembly.

Because Steininger '915 is not in the same field of endeavor as the Applicants, nor is Steininger '915 attempting to solve the same problem as the Applicants, Steininger '915 is not analogous art. Therefore, the combination of Cobb '346 and Svenvig '480 with Steininger '915 is improper and the rejection must fail.

Even if Steininger '915 was analogous art, the combination, however untenable, would still fail because Steininger '915 fails to overcome the shortcomings of Cobb '346 and Svenvig '480 for the same reasons as set forth above regarding claim 11, from which claims 13, 14 and 17 depend. Steininger '915 fails to teach a dynamic support for household electrical appliances a rotary element configured to rotate about a swivel axis relative to the stationary element or an elastic snap-fit connection coupling the stationary element and the rotary element such that the swivel axis intersects the horizontal axis and the rotary element is free to rotate relative to the stationary element, as set forth in independent claim 11, from which claims 13, 14 and 17 depend. Steininger '915 is incapable of rotation, so even if the combination of Cobb '346 and Svenvig '480 were some how capable of rotation about a vertical swivel axis, the snap-fit connection of Steininger '915 would destroy the rotation.

Therefore, for the reasons cited above, claims 13, 14 and 17 are patentable over Steininger '915 in view of Cobb '346 and Svenvig '480. Claims 13, 14 and 17, which depend from claim 11, are further patentable for the same reasons as claim 11 set forth above.

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CONCLUSION

No new matter has been added by the foregoing amendments, full support therefore being shown in the drawings and specification as filed. All claims remaining in the application are believed to now be in condition for allowance. Early notification of allowability is respectfully requested.

If there are any questions regarding this matter, please contact the undersigned attorney.

Respectfully submitted,

AUGUSTO RIBOLZI, ET AL.

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By: /Mark A. Davis/
Mark A. Davis, Reg. No. 37,118
McGARRY BAIR PC
32 Market Ave. SW, Suite 500
Grand Rapids, Michigan 49503
(616) 742-3500

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